

CLEAN CLAIMS

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A1 15. (AMENDED ONCE) A method of providing a subscriber with program information regarding a plurality of concurrently broadcast programs in a data distribution system which comprises a multimedia broadcast medium which concurrently carries a plurality of programs, which are made available to a plurality of subscribers, which are connected to the multimedia broadcast medium via respective terminal adapters which contain a directory member, comprising the steps of:

storing an entirety of directory information in a memory located in said multimedia broadcast medium;

generating subscriber interest profile data which is indicative of ones of said concurrently broadcast programs which are likely to be of interest to a subscriber at said subscriber terminal associated with said subscriber;

utilizing said subscriber interest profile data, excerpting a subscriber specific subset of directory information from said directory information stored in said memory;

transmitting said excerpted directory information to said terminal adapter memory for storage therein; and

enabling a subscriber at said subscriber terminal device to access said excerpted directory information stored in said terminal adapter memory.

16. (CANCELLED)

A21 **17. (AMENDED ONCE)** The method of claim 15 wherein said step of managing said plurality of data items further comprises:

calculating, in response to said subscriber accessing ones of said plurality of broadcast programs, similarity measures to identify other likely broadcast programs of interest to said subscriber.

18. (AMENDED ONCE) The method of claim 15 wherein said step of managing said plurality of data items further comprises:

searching, in response to said user interest profile data, said prioritized information segments of all of said data items to identifying a selected data item which most likely corresponds to said user interest profile data.

19. (NOT AMENDED) The method of claim 15 further comprising the step of:

scheduling activation of said step of transmitting said excerpted directory information to sequentially serve said plurality of subscriber terminals according to a determined priority schedule.

20. (NOT AMENDED) The method of claim 18 wherein said step of scheduling comprises:

deciding what excerpted directory information is most likely usefully broadcast to each of said plurality of subscriber terminals.

21. (NEW) A method of optimizing communication, comprising:

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- (a) providing at least one data source of a plurality of target object data items;
- (b) providing a plurality of data terminals, each assigned to a particular one of a plurality of users;
- (c) interconnecting said at least one data source and said plurality of data terminals over a communications medium;
- (d) automatically generating user interest profile data for each of said plurality of users which indicates which particular ones of said plurality of target object data items are likely to be of interest to each of said plurality of users;
- (e) searching, utilizing said user interest profile data, said plurality of target object data items to identify for each of said plurality of users at least one of said plurality of target object data items which most likely corresponds to said user interest profile data;
- (f) delivering to said plurality of data terminals particular ones of said plurality of target object data items over a plurality of alternative virtual channels prioritized in a manner based upon the results of said step of searching.

A3
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22. (NEW) A method according to claim 21, wherein said plurality of target object data items comprise at least one of:

- (1) multimedia information;
- (6) data items which are divided into a plurality of information segments;
- (7) internet links;
- (8) video content;
- (9) MPEG-compressed streams of video.

23. (NEW) A method according to claim 21, wherein said data terminals comprise at least one of:

- (8) terminal adaptors;
- (9) network interface devices;
- (10) mobile devices;
- (11) personal digital assistants;
- (12) network computers;
- (13) personal computers;
- (14) set top boxes.

24. (NEW) A method according to claim 21, wherein said communications medium comprises at least one of:

- (4) a cable television system;
- (5) a digital broadcast system;
- (6) a video-on-demand system.

A3
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25. (NEW) A method according to claim 21, wherein said user interest profile data is maintained in said data terminals.

26. (NEW) A method according to claim 21, further comprising:

(g) providing a processor in each of said data terminals;

(h) utilizing said processor to select a plurality of data items as corresponding to said user interest profile data during said step of searching, and to assign data items to virtual channels for consideration by said users.

27. (NEW) A method according to claim 26, wherein during said step of searching said processor compares directory information associated with each of said plurality of target data items to said user interest profile data to determine whether there is correspondence.

28. (NEW) A method according to claim 21, further comprising:

(g) collecting target data use information, such as viewing habit data, and transmitting it through said communications medium for use in refining said user interest profile data.

A3
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29. (NEW) A method according to claim 21, further comprising:

- (g) providing at said at least one data source a directory of descriptive information for said plurality of target object data items;
- (h) providing in a preselected manner for each of said plurality of users a portion of said directory of descriptive information which best matches the user interest profile of each of said plurality of users.

30. (NEW) A method according to claim 21, further comprising:

- (g) dividing each of said plurality of target data items into information segments; and
- (h) during said step of delivering, transmitting said plurality of target data items in transmissions which utilize said information segments in order to reduce the effective bandwidth required for service.

31. (NEW) A method according to claim 30, wherein, during said step of delivering, information segments of said plurality of target data items are prefetched in order to optimize transmission activities.

32. (NEW) A method according to claim 31, wherein said information segments of said plurality of target data items are prefetched based upon known location data relative to said plurality of users.

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33. (NEW) A method of optimizing communication, comprising:

- (a) providing at least one data source of a plurality of target object data items;
- (b) providing a directory of information related to said plurality of target object data types;
- (c) providing a plurality of data terminals, each assigned to a particular one of a plurality of users;
- (d) interconnecting said at least one data source and said plurality of data terminals over a communications medium;
- (e) automatically generating user interest profile data for each of said plurality of users which indicates which particular ones of said plurality of target object data items are likely to be of interest to each of said plurality of users;
- (f) automatically generating a user-specific directory of said plurality of target objects for each of said plurality of users, utilizing said user interest profile data, which includes only segments of said directory of information which are pertinent to that particular user;
- (f) searching, utilizing said user interest profile data and said user-specific directory of said plurality of target data objects, said plurality of target object data items to identify for each of said plurality of users at least one of said plurality of target object data items which most likely corresponds to said user interest profile data;

A3
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(g) delivering to said plurality of data terminals particular ones of said plurality of target object data items prioritized in a manner based upon the results of said step of searching;

(h) providing in a preselected manner for each of said plurality of users a portion of said directory of descriptive information which best matches the user interest profile of each of said plurality of users.

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34. (NEW) A method according to claim 33, further comprising:

- (l) providing updated directories of information related to said plurality of target data items;
- (m) instructing particular affected ones of said plurality of data terminals to delete user-specific directories;
- (n) upon detection of a request for directory information at a particular one of said plurality of data terminals, transmitting a new, updated user-specific directory to said particular one of said plurality of data terminals.

35. (NEW) A method according to claim 34, further comprising:

- (l) periodically sending time-of-day and date information to said plurality of data terminals to allow accurate scheduling and transmission.

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36. (NEW) A method of providing a subscriber with program information regarding a plurality of concurrently broadcast programs in a data distribution system which comprises a multimedia broadcast medium which concurrently carries a plurality of programs, which are made available to a plurality of subscribers, who are connected to the multimedia broadcast medium via respective terminal adapters which contain a directory memory, comprising the steps of:

storing an entirety of directory information, that describes said plurality of concurrently broadcast programs, in a memory located in said data distribution system;

producing a prioritized plurality of sets of information segments from each of said plurality of concurrently broadcast programs which are available from said data distribution system;

excerpting a subscriber specific subset of directory information from said directory information stored in said memory;

transmitting said excerpted directory information to said terminal adapter directory memory for storage therein; and

enabling a subscriber at said terminal adapter to access said excerpted directory information stored in said terminal adapter directory memory.

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37. (NEW) The method of claim 36 wherein said step of excerpting a subscriber specific subset of directory information comprises:

generating subscriber interest profile data which is indicated of ones of said concurrently broadcast programs which are likely to be of interest to a subscriber at said terminal adapter associated with said subscriber.

38. (NEW) The method of claim 37 wherein said step of generating subscriber interest profile data comprises:

calculating, in response to said subscriber accessing ones of said plurality of broadcast programs, similarities measures to identify other likely broadcast programs of interest to said subscriber.

39. (NEW) The method of claim 37 further comprising the step of:

scheduling activation of said step of transmitting said excerpted directory information to sequentially serve said plurality of terminal adapters according to a determines priority schedule.

40. (NEW) The method of claim 39 wherein said step of scheduling comprises:

deciding what excerpted directory information is most likely usefully broadcast to each of said plurality of terminal adapters.

41. (NEW) The method of claim 39 wherein said step of providing data to said terminal adapter comprises:

transmitting to said terminal adapter, in response to said user inputting data at said terminal adapter to select one of said plurality of data items, data representative of a second of said prioritized plurality of sets of information segments of said selected one of said plurality of data items.

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42. (NEW) The method of claim 41 wherein said step of providing data to said terminal adapter further comprises:

transmitting to said terminal adapter, in response to transmission of said second of said prioritized plurality of sets of information segments of said selected one of said plurality of data items, data representative of at least a third of said prioritized plurality of sets of information segments of said selected one of said plurality of data items.

43. (NEW) The method of claim 41 wherein said step of providing data to said terminal adapter comprises:

transmitting to said terminal adapter, in response to said user inputting data at said terminal adapter to request the entirety of said selected one of said plurality of data items, data representative of all of said prioritized plurality of sets of information segments of said selected one of said plurality of data items.
